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US005914763A

United States Patent [19]**Fujii et al.**[11] **Patent Number:** **5,914,763**[45] **Date of Patent:** **Jun. 22, 1999**

[54] **LIQUID CRYSTAL DISPLAY WITH
SUBSTANTIALLY EQUAL RESISTANCES
FOR SETS OF TERMINAL ELECTRODES
AND INCLINED WIRING ELECTRODES**

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[21] **Appl. No.:** **09/056,780**

[22] **Filed:** **Apr. 8, 1998**

Related U.S. Application Data

[63] **Continuation of application No. 08/523,842, Sep. 7, 1995,**
Pat. No. 5,757,450.

[30] Foreign Application Priority Data

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Sep. 8, 1994	[JP]	Japan	6-214825
Sep. 12, 1994	[JP]	Japan	6-216857

[51] **Int. Cl.⁶** **G02F 1/1345; G02F 1/1343**

[52] **U.S. Cl.** **349/149; 349/143; 349/150;**
349/152

[58] **Field of Search** **349/143, 152,**
349/150, 149

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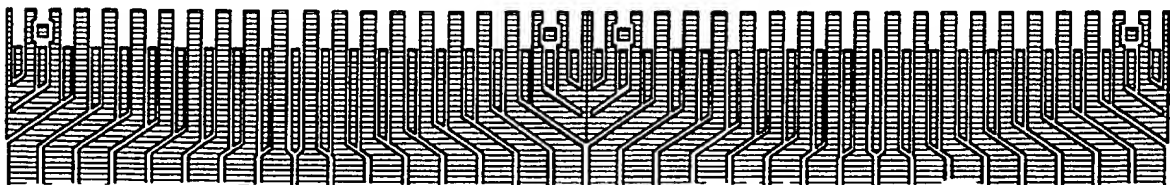
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[57] ABSTRACT

A liquid crystal display including a plurality of parallel display electrodes wired over an electrode substrate, terminals for the display electrodes led out to the end portion of the electrode substrate and connected to TCPs, the terminals having pitches smaller than those of the display electrodes, and leadout wirings for connecting the display electrodes and the terminals. The leadout wirings each consist of a portion extending from a respective display electrode as it is, a portion extended from the respective terminals as it is, and almost parallel, inclined linear wiring that connects the two extended portions. The length of the two extended portions and the width of the inclined linear wiring are adjusted so that the wiring resistances of the individual leadout wirings are substantially equal.

24 Claims, 27 Drawing Sheets

The
United
States
of
America



The Commissioner of
Patents and Trademarks

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.

If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.

If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extension.

J. Todd Pichini

Acting Commissioner of Patents and Trademarks

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